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will go a long way toward heading off domestic political frenzy over Iran in the United States; Iran need not take its place alongside Rhodesia and Taiwan as rallying

points for the right wing.

There are other specific gestures that would have a dramatic and immediate impact on the Iranians: The president could take visible steps to eliminate the CIA presence at the embassy in Tehran and provide some reassurance of nonintervention and accommodation to the new leadership. He could also name a new American ambassador to Iran who has never had any ties with the shah and is associated with a more receptive attitude toward Third World nationalism than William Sullivan. In a culture that considers symbolic acts to be substantively revealing, that would be taken as a fresh start.

RETHINKING THE UNTHINKABLE

by Leon V. Sigal

While Congress and the American public agonize over a proposed new strategic arms limitation agreement (SALT II), another debate—more muted, but potentially more agonizing—is percolating today deep within the defense community. That debate, stimulated by recent innovations in weapons systems, concerns the doctrine that rationalizes their development and deployment. What is at stake is a fundamental re-examination of U.S. strategic thinking and a growing acceptance among American strategists of the idea of fighting a nuclear war.

The refrain is familiar. Twenty years ago, when strategists began to foresee the end of American nuclear supremacy, two seminal works on nuclear war appeared: Albert Wohlstetter's article, "The Delicate Balance of Terror," and Herman Kahn's lectures, On Thermonuclear War. Both questioned American reliance on deterrence and pointed to the eventuality of nuclear war. Wohlstetter emphasized that deterrence "would not of itself remove the danger of accidental outbreak or limit the damage in case deterrence failed; nor would it be at all adequate for crises on the periphery." Kahn was more explicit, asserting that forces for deterrence might not suffice and that the United States had to prepare to fight a nuclear war:

Once one accepts the idea that deterrence is not absolutely reliable and that it would be possible to survive a war, then [one] may be willing to buy insurance—to spend money on preparations to . . . limit damage, facilitate recuperation, and to get the best military result possible—at least "to prevail" in some meaningful sense if you cannot win.

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Short of direct attack on the United States, Kahn distinguished two other possibilities to be deterred. The first was indirect enemy aggression, such as an attack on or a threat against a European ally. The second was the escalation of war, or the threat of such escalation, for nuclear bargaining or blackmail. In order to prevent such circumstances from arising, Kahn contemplated first use of nuclear weapons by the United States.¹

Today, when both the United States and the USSR are capable of retaliating with fear-some consequences after an enemy first strike, strategists are once again thinking the unthinkable—considering circumstances under which the United States would initiate and wage nuclear war. This renewed discussion is not a superficial shift in doctrine. It reflects changes in targeting programs and force procurement within the armed services.

Throughout the two intervening decades, the United States has had many more nuclear warheads and targeting options than necessary to deter a first strike on the United States or an attack on its European allies. Never more than a small fraction of the 25,000 targets in the strategic plan were enemy cities. Since the mid-1960s, moreover, Washington has had untold numbers of nuclear weapons based around the globe-about 7,000 in Europe alone. In addition to the weapons carried on long-range strategic missiles and bombers, they include intermediate-range ballistic missile (IRBM) warheads, bombs carried by tactical aircraft, artillery shells, demolition munitions, and surface-to-air missile warheads for air defense. Their destructive force ranges from below that of some conventional bombs to far greater than that of the atomic bombs dropped on Hiroshima and Nagasaki.

No Substitute for Victory

The advent of nuclear parity with the USSR threatened to invalidate traditional



military ideology. Yet it has never shaken the faith of some strategists, civilian as well as military, in the tenets of that ideology: that armed forces exist to fight wars, not just to deter their outbreak; that in war there is no substitute for victory; that defeating the enemy requires overwhelming its forces; and that the services should have whatever capabilities they need to accomplish that end.

¹ Albert Wohlstetter, "The Delicate Balance of Terror," Foreign Affairs, January 1959; and Herman Kahn, On Thermonuclear War (Princeton, N.J.: Princeton University Press, 1960).

These traditionalists find nuclear war fighting attractive.

Now, a newly developed generation of battlefield nuclear weapons has strengthened their hand. Improved accuracy has permitted miniaturization of warheads, reducing blast effects to the equivalent of less than 50 tons of TNT. Changes in design and materials have led to the development of enhanced radiation artillery shells (so-called neutron bombs), which are capable of killing men in tanks without devastating everything in the surrounding area. Suppressed radiation weapons can destroy hard targets, while reducing fallout. Induced radiation weapons yield radioactivity of short duration-hours or, at most, days-which can be used to close a mountain pass temporarily. Finally, novel guidance techniques have greatly improved the accuracy of cruise missiles for use against hard targets, whether on the battlefield or in the enemy heartland.

Also new is the sanguine, if not cavalier, attitude among growing numbers of defense planners who maintain that the United States should build a nuclear war-fighting capability into battlefield deployments and targeting plans. The U.S. war-fighting posture is even publicly acknowledged, albeit obliquely, in official pronouncements. In the 1975 Annual Defense Department Report to Congress, then Secretary of Defense James R. Schlesinger called for an increase in targeting options and in forces to strike those targets. He spoke of "a series of measured responses to aggression which bear some relation to the provocation, have prospects of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence." It was under him that the nuclear war-fighting doctrine received official sanction.

To appreciate what Schlesinger meant, it may be useful to compare the five elements of nuclear war fighting that Paul Nitze has warned that the Soviets are developing:

1. A powerful counterforce capability. . . . 2. Forces sufficiently hardened, dispersed, mobile, or defended as to make a possible counterforce response by the other side disadvantageous. . . .

3. Sufficient survival reserve forces . . . to hold the enemy's population and indus-

try disproportionately at risk;

4. Active and passive defense measures, including civil defense and hardened and dispersed command and control facilities. . . .

5. The means and the determination not to let the other side get in the first blow -i.e., to pre-empt if necessary.2

Yet a Russian Nitze closely reading Schlesinger's defense posture statement for 1976 might have reached the same conclusion about American intentions. Schlesinger saw the need for American forces that

in response to Soviet actions, could implement a variety of limited preplanned options and react rapidly to retargeting orders so as to deter any range of further attacks that a potential enemy might contemplate. . . . This force should have some ability to destroy hard targets, even though we would prefer to see both sides avoid major counterforce capabilities. . . . It should also have the accuracy to attack with low-yield weapons, soft point targets without causing large-scale collateral damage. And it should be supported by a program of fallout shelters and population relocation....

The Great Debate

Several doctrinal disagreements pit the war fighters against exponents of the still dominant school of strategic thought, the stable balancers.

To stable balancers, the sheer destructiveness of nuclear war has invalidated any distinction between winning and losing. Thus, it has rendered meaningless the very idea of military strategy as the efficient employment of force to achieve a state's objectives. As former Secretary of Defense Robert Mc-Namara once stated, "There is no longer any such thing as strategy, only crisis management." Moreover, the certainty that any use of nuclear weapons would result in un-

² Paul H. Nitze, "Deterring Our Deterrent," FOREIGN POLICY 25 (Winter 1976-77), pp. 197-198.

precedented devastation makes the firebreak between conventional and nuclear weapons more salient than any other distinction, geo-

graphical or functional.

In the event that the threshold between conventional and nuclear war is crossed, stable balancers maintain that no other limits are likely to provide an obvious focal point for mutual restraint. In other words, graduated deterrence means gradual escalation. For these reasons, Paul Warnke, former director of the Arms Control and Disarmament Agency, opposed miniaturization of battlefield nuclear weapons in testimony before the Arms Control Subcommittee of the Senate Foreign Relations Committee in 1974:

To the extent that mininukes blur the distinction between conventional weapons and nuclear weapons, they lower the nuclear threshold. . . . [In] the event of actual conflict the availability of these

Stable Balancers argue that:

1) Nuclear weapons mark a distinct breakpoint in the historical evolution of warfare in the current continuum of military capability.

2) First use of nuclear weapons will lead to reciprocal escalation, eventually

spiraling into general war.

3) Command and control, precarious in the best of circumstances, is all the more so in nuclear war.

4) Nuclear war resulting from an accident, a miscalculation, or the unauthorized use of nuclear weapons is best averted by deploying fewer nuclear weapons and centralizing authority over their use.

5) A Soviet attack on Europe is deterred by conventional forces and the risk

of nuclear escalation.

6) Marginal superiority in nuclear capability under conditions of mutual assured destruction has little political significance. smaller, neater, cleaner nuclear weapons might lead to their premature and unnecessary use. . . . And once the nuclear threshold is crossed the process of escalation could become irreversible.

This expectation rests on the assumption that the USSR would react to American first use with escalation of its own.

Likewise, stable balancers consider command and control systems inadequate for limiting escalation. Rapid destruction and uncertainty would subject command and control arrangements to an unprecedented strain that they are unlikely to withstand.

Stable balancers also point out that procuring more weapons of greater technological sophistication and designing more complex targeting programs to meet every conceivable contingency may in fact weaken mutual deterrence. Far from inducing restraint, such policies might prompt the adversary to buy more weapons of its own and increase the

War Fighters argue that:

- 1) Nuclear weapons, like all previous advances in military technology, are usable and likely to be used.
- 2) Deterrence will remain a viable means of controlling escalation following the outbreak of nuclear war. Even if it does not, such a war is still worth winning.
- 3) Highly centralized command and control in nuclear war would facilitate bargaining in ways it has not in conventional war.
- 4) The possibility of unintentional nuclear exchange requires a full range of options to reinforce deterrence.
- 5) A Soviet attack on Europe is deterred by the certainty that the United States will use its nuclear weapons. This is assured only by having options for every contingency.
- 6) Even marginal nuclear superiority will reassure allies and make opponents more cautious.

risk of accident, miscalculation, or unauthorized use. Moreover, in a crisis, once war is perceived as inevitable, battlefield nuclear weapons may become targets—like the American fleet at Pearl Harbor—instead of deterrents to the enemy. The presence of these weapons near the front might cause the enemy to launch a pre-emptive strike in a crisis, out of fear that a commander on the front would use them rather than see them overrun. In any event, they would hardly deter an attack they could not survive.

Stable balancers also wonder whether either side during a nuclear war would be able to distinguish a limited counterforce attack from one aimed at the destruction of all its forces or its population—a distinction critical to the doctrine of flexible response. Thus, the question is how many more options and new forces will enhance deterrence without increasing the chances of nuclear war. A few more, stable balancers believe, but not many.

Rather than resorting to new weapons systems in the event that deterrence fails in Europe, stable balancers argue that the United States should initially rely on conventional defense. Nuclear weapons should be introduced only as a last resort—some say only in response to first use by the other side—and even then their use should be confined to the battlefield.

Additional tactical nuclear weapons in Europe increase the risk of escalation instead of assuring deterrence or defense. Alain Enthoven, who headed the Office of Systems Analysis under McNamara, explained this argument before Congress in 1974:

Tactical nuclear weapons cannot serve to redress a numerical inferiority in military manpower. . . [They] cannot defend Europe; they can only destroy it. . . . Beyond the limited demonstrative use of a few weapons, there is no such thing as tactical nuclear war in the sense of sustained purposive military operations. . . Tactical nuclear weapons cannot lead to a predictable military outcome. Nobody knows how to fight a tactical nuclear war.

Stable balancers see little political utility to be derived from a marginal numerical advantage in nuclear capabilities. "What in the name of God is strategic superiority?" former Secretary of State Henry Kissinger mused aloud at a Moscow press conference in July 1974. "What do you do with it?" It is difficult to demonstrate how numerical advantages influence the behavior of allies, enemies, or officials in the American government. In Warnke's words:

The Soviet Union has more missile launchers than we have. Now that is a kind of "superiority" which is clearly without any kind of significance, unless by our own rhetoric we give it political significance that it does not deserve. In the most meaningful measure, which is individually deliverable nuclear warheads, we still have something close to a three-to-one lead. And even that doesn't give us any meaningful superiority....³

War fighters, however, consider nuclear weapons an integral part of U.S. military options. Hence, they minimize the significance of the nuclear threshold. In his book, On Escalation, Kahn argues that "the line between the external world and the nation may even be stronger as a firebreak than the threshold between conventional and nuclear war, since it is an older distinction, invested with far more emotion and prestige." Some war fighters advocate the deployment of mininukes and counterforce capabilities as a means of further eroding the firebreak.

Regardless of how nuclear war breaks out, war fighters maintain that deterrence would not cease to function as a restraint to further escalation. In their scenarios, restoration of deterrence requires a one-shot escalation to convince the enemy that the United States is prepared to retaliate further unless the aggression is brought to an end. Like the stable balancers' expectation of an escalatory spiral, the war fighters' faith in resurrecting deterrence is premised on the belief that the USSR will respond to U.S. first use with restraint.

[&]quot;The Real Paul Warnke," interview by Walter Miale, The New Republic, March 26, 1977, p. 23.

Should the one-shot escalation fail to deter the enemy, some war fighters are prepared to fight to prevail, if not to win. Two former Defense Department officials, T. K. Jones and W. Scott Thompson, question the relevance of deterrence based on mutual assured destruction (MAD) and suggest that it be replaced by a "survival-oriented doctrine," emphasizing civil defense, air defense, and antiballistic missiles (ABMs). This, they claim, would enable the United States to come out ahead of the Soviet Union in a nuclear exchange.⁴

They assume that relative deprivation, rather than unacceptable damage, is what counts in nuclear war. For any level of devastation, however catastrophic, may prove acceptable to the Russians and hence fail to deter them from striking first. Thus, they maintain that the Soviet objective is not to prevent destruction but to recover following an exchange. They conclude that the only alternative is for the United States to adopt recovery as its objective, too.

War fighters also assert that a limited nuclear exchange would not subject command, control, and communications to unprecedented strain. Such problems, says Kahn in On Escalation, "which are very great in sustained high-intensity nuclear wars, are much reduced in slow-motion exchanges that are limited and deliberate." Envisioning first use of nuclear weapons for "redress, warning, bargaining, punitive, fining, or deterrence purposes," Kahn cites the possibility that "[one] side is losing conventionally and decides to use nuclear weapons. It doesn't use them to damage the other side in a way that really hurts, because that could easily cause escalation to get out of control. But it might drop a bomb or two on some logistical target, such as a . . . railroad yard."

A Soviet attack in Europe is deterred only by the certainty of appropriate U.S. retaliation. NATO's strategy of flexible response envisages controlled escalation in Europe, The first is the decoupling of U.S. strategic forces from NATO. MAD makes American willingness to use those forces in defense of its allies seem less than credible. The capacity for limited strikes on Soviet forces or economic targets, war fighters say, would reassure ally and enemy alike of American intentions, but it would do so only if the United States is willing to initiate nuclear war. Deterrence would be reinforced by dispersing nuclear weapons on the battlefield and authorizing theater commanders to use them under certain circumstances. Such first use would not be confined to the battlefield.

Secondly, NATO strategy calls for tactical nuclear weapons to deter Soviet first use in Europe, to retaliate if deterrence fails, and to plug holes in the allied conventional defense line. Yet it is difficult to design weapons, targeting programs, and battlefield tactics compatible with all three objectives. War fighters resolve this problem by seeking to shift emphasis away from deterrence.

War fighters claim that even marginal strategic superiority has political significance. In the words of Colin S. Gray:

Americans' perceptions of their country's relative standing, [and] perceptions by others, . . rest, in part, . . . upon assessments of the state of the strategic nuclear balance. Nobody knows, with any confidence, how a World War III would terminate. . . . But everybody knows which way the balance is tending, and this . . . contributes to a constricting of American freedom of foreign policy action. ⁵

Choosing between Irreconcilables

Faced with such fundamentally irreconcilable differences between war fighters and

⁴ T. K. Jones and W. Scott Thompson, "Central War and Civil Defense," Orbis, Fall 1978.

⁶ Colin S. Gray, "The Strategic Forces Triad: End of the Road?" Foreign Affairs, July 1978, pp. 774-775.

stable balancers, it is difficult to make a choice between the two. Both doctrines are largely deductive, almost axiomatic. Historical evidence does not facilitate the choice—indeed, what is at issue is precisely whether the lessons of past wars apply to nuclear conflict.

There is no opportunity for experimentation when dealing with nuclear war. Nowhere is this more transparent than in the liturgy on the Triad. "In the early 1960's," writes Gray, "the American defense community understood, almost as an axiom, that strategic stability flowed from the existence of large and diverse forces." What evidence would validate or invalidate such an axiom?

Logic is of little help in making the choice. The stable balancers' belief rests on a central paradox: How can an enemy be deterred by retaliatory threats that the United States would manifestly prefer not to carry out? Thomas Schelling has sidestepped the paradox by citing the risk that nuclear war, once it erupts, may get out of hand—"the threat that leaves something to chance." But that leaves too much to chance for war fighters, who want to fill every lacuna in the stable balancers' logic with options for limited nuclear retaliation.

Yet war fighters create paradoxes of their own. In attempting to deter a first strike against the United States, they promote weapons systems that make retaliation more likely but reduce damage to the enemy, thereby weakening deterrence. In seeking to prevent war in Europe, they must reconcile the U.S. intent to threaten tactical nuclear war with the risk of escalation. Likewise, in deterring nuclear blackmail, they must explain how to threaten U.S. first use without encouraging Soviet pre-emption.

Rational choice between the stable balancers' and the war fighters' doctrines is so difficult that a president may be tempted to hedge, waver, or obfuscate. The difficulty of choosing between the two logics is only compounded by the political stature of their pro-

Although a choice between the two schools of thought is difficult, a closer examination of each clearly reveals the limitations of the war fighters' logic. Their doctrine is based on the contention that leaders will retain control of nuclear forces, that flexibility in both deployment and targeting will provide opportunities to de-escalate, and that leaders can use cease-fires for bargaining with the opponent and with the domestic opposition. The difficulties involved in processing information and options under conditions of extreme uncertainty and tension and the constraints imposed by bureaucratic, domestic, and alliance politics under such circumstances cast doubt on war fighters' contentions.

Organizational routines may greatly constrict flexibility in a crisis. War plans may be so recondite and political leaders so absorbed in other matters that military organizations may determine which plans are put into effect without the civilian leaders' full awareness of the alternatives. The only wartime use of atomic weapons to date, the American bombings of Japan, is a case in point. President Harry S Truman was never exposed to the full array of options at his disposal. He may not have even understood precisely what he had authorized the Army Air Force and the Manhattan Project to do.

Even when civilians devise their own options, organizations are notoriously resistant to modifying their routines to accommodate them. This was clearly illustrated by Mc-Namara's difficulties in getting the Navy to draw in its blockade of Cuba in 1962. Com-

⁶ Thomas Schelling, Strategy of Conflict (New York: Oxford University Press, 1963).

municating orders may also prove difficult. Several hours before the six-day Middle East war of 1967, the Joint Chiefs of Staff transmitted four messages to move the U.S.S. Liberty into safer waters. None arrived in time. Under less ideal conditions than those of 1967, command and control procedures would be under much greater stress and might collapse completely.

Limited targeting against an enemy's military forces and industry also imposes unusual demands on the armed services. It requires an organization prepared for large-scale retaliation to conduct discreet, carefully limited attacks under crisis conditions. The airmen who struck Nagasaki, for instance, were under orders to conduct visual bombing only so as to ensure accuracy. Instead, they made a radar approach through the cloud cover and missed their target by a considerable distance.

Cognitive barriers to crisis performance may also produce rigidity or, even worse, paralysis. Trained for retaliation against nuclear attack, enemy commanders must be able to recognize a limited U.S. counterforce strike large enough to be taken seriously but small enough not to trigger a full-scale attack. Yet this assumes that the enemy's perceptions during a crisis are accurate, that the threshold beyond which it responds is well defined, and that the United States gauges that threshold correctly in its attack. The American experience with the bombing of North Vietnam indicates otherwise.

Under the strain of uncertainty, presidents would also be subject to considerable stress in making decisions. In Kissinger's words, "It is not easy to see how a president could ever gain sufficient confidence to stake everything on weapons for which there is no operational experience in wartime, on the basis of tenuous intelligence and with the certainty of tens of millions of casualties."

Unconcerned about rigidity under such

circumstances, James Schlesinger argued before Congress in 1974 that "doctrines control the minds of men only in periods of nonemergency. They do not necessarily control the minds of men during periods of emergency." Yet paralysis, not creativity, would be the likely result of improvisation in crisis.

Political pressures, far from diminishing, may be especially intense in a nuclear crisis. Theater commanders may be anxious to use every weapon at their disposal rather than see their forces suffer even a temporary defeat. Chiefs of staff may be unwilling to see only one service gain authority to use nuclear weapons. The greater the variety of nuclear forces, the more intense the political pressure. Leaders may feel they must respond to any nuclear attack, however limited. They might likewise be reluctant to accept a settlement without something to show for the destruction that resulted from a nuclear exchange. The extent to which the Kennedy administration sought to camouflage any concessions it made to the USSR during the 1962 Cuban missile crisis suggests that leaders feel compelled to protect their political flanks at home, even when faced with nuclear confrontation. If political concessions seem riskier than escalation, terminating nuclear war might be treacherous.

Alliance politics will also play a part. In Washington tactical nuclear weapons may appear to be a more plausible defense for Europe than strategic nuclear weapons, which invite a Soviet counterattack against the United States. Yet what looks tactical an ocean away may well seem strategic to those living where the warheads will explode. Allies may have overwhelming incentives during a crisis to use theater nuclear weapons against the Soviet heartland in the hope of insuring that any nuclear exchange will take place over their heads. In a nuclear confrontation in Europe, political differences may not be confined to mere words: The French force de frappe may stiffen the back of an overly flexible American response.

⁷ Henry A. Kissinger, "American Strategic Doctrine and Diplomacy," in Michael Howard (ed.), The Theory and Practice of War (New York: F. A. Praeger, 1967), pp. 282-283.

Seductive Options

The new generation of nuclear weapons on the drawing board and the increased acceptance of nuclear war fighting among defense planners have stimulated a doctrinal challenge to stable balancers. Yet three current conditions weigh in their favor.

First, the conventional balance in Europe does not appear to be conspicuously unfavorable to NATO by the standards of the past two decades. This assessment has lent new realism to NATO's effort to modernize and upgrade its conventional forces.

Another is the improved accuracy of weapons systems, such as precision-guided munitions. These make possible the substitution of conventional for nuclear warheads for some missions.

A third is the absence of any real threat to the mutuality of assured destruction. The alleged vulnerability of American land-based Minuteman missiles and Soviet civil defense are often cited as assuring Soviet strategic advantage, yet they pose no such threat. A first strike against all U.S. land-based missiles, a theoretical possibility by the mid-1980's, would be inordinately complex and risky for the USSR. Moreover, it would leave the United States with thousands of nuclear weapons on submarines and bombers with which to retaliate. Soviet civil defense preparations would not prevent an American second strike from imposing unacceptable damage. Still, war fighters regard Minuteman vulnerability and Soviet civil defense as major problems, since both affect the relative numbers of survivors after a nuclear exchange.

Purported Minuteman vulnerability has prompted the war fighters' enthusiasm for the MX missile, with its hard-target kill capacity, although increased mobility alone would be an adequate response. Likewise, the prospect that the Soviets could survive a nuclear exchange better than the Americans has generated support for a U.S. civil defense program, which would actually promote an American first, not second, strike.

Yet the Carter administration, while perhaps slowing the pace somewhat, continues to seek options for nuclear war fighting. However seductive the appeal of those options to military traditionalists, the administration should now reconsider the trend toward a nuclear war-fighting doctrine before it is too late.

A number of decisions are pending that could implicitly resolve the debate over strategy. The war fighters' wish list includes silo-busting ballistic missiles, theater nuclear forces capable of striking the USSR from Western Europe, modernization of battlefield nuclear weapons, and civil defense. These programs would make the U.S. force posture consonant with nuclear war fighting. Their approval would constitute a fundamental shift in American strategy.

War-fighting doctrines, despite their abstractness, can take on a reality all their own. Built into force structures and targeting programs, they can accelerate the pace of the arms race and increase the chances of nuclear war. Until now, war fighters have been more concerned with the process of escalation than with the control of that process. They have offered only the vaguest notion of how a nuclear war, once under way, might end. They have paid scant attention to organizational, cognitive, and political impediments to war termination. Those who contemplate nuclear war fighting should demonstrate how they would provide for a pause in the escalation of the conflict and how leaders on both sides could take advantage of that pause to achieve a settlement. Twenty years after Wohlstetter and Kahn proposed strategy for waging nuclear war, it is time to make war fighters think about terminating one.